[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0214; Project Identifier 2018-CE-064-AD; Amendment 39-21839; AD 2021-24-18]

RIN 2120-AA64

Airworthiness Directives; Viking Aircraft Limited Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for all Viking Air Limited Model DHC-3 airplanes. This AD results from mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI identifies the unsafe condition as fatigue damage of the wing strut lug fitting components and the fuselage to wing strut attachment (tie-bar). This AD requires determining service life limits for the wing strut fitting on the main spar and for the tie-bar and following instructions for removal and replacement of affected parts. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For service information identified in this final rule, contact Viking Air Limited Technical Support, 1959 De Havilland Way, Sidney, British Columbia, Canada, V8L 5V5; phone: (North America) (800) 663-8444; fax: (250) 656-0673; email: technical.support@vikingair.com; website: https://www.vikingair.com/support/service-bulletins. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, MO 64106. For

information on the availability of this material at the FAA, call (816) 329-4148. It is also available at https://www.regulations.gov by searching for and locating Docket No. FAA-2021-0214.

Examining the AD Docket

You may examine the AD docket at https://www.regulations.gov by searching for and locating Docket No. FAA-2021-0214; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the MCAI, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Aziz Ahmed, Aviation Safety Engineer, New York ACO Branch, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; phone: (516) 287-7329; fax: (516) 794-5531; email: aziz.ahmed@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to all Viking Air Limited Model DHC-3 airplanes. The NPRM published in the *Federal Register* on June 28, 2021 (86 FR 33916). The NPRM was prompted by MCAI originated by Transport Canada, which is the aviation authority for Canada. Transport Canada has issued AD CF-2017-29, dated August 24, 2017 (referred to after this as "the MCAI"), to correct an unsafe condition for Viking Air Limited Model DHC-3 airplanes. The MCAI states:

> It has been determined that the current maintenance program does not adequately address potential fatigue damage of the wing strut lug fitting components or the fuselage to wing strut attachment (Tie Bar). Affected parts must be replaced before specified air time limits are reached to avoid fatigue cracking of the affected parts. Cracking which is not detected may compromise the structural integrity of the wing or the Tie-Bar.
>
> Fatigue damage occurs more rapidly on aeroplanes that are operated at higher gross weights. For that reason, the corrective actions of this [Transport Canada] AD must be accomplished sooner for aeroplanes that have been certified for operation at higher gross weights.

> Fatigue damage also occurs more rapidly on aeroplanes that are operated below 2000 feet above ground level (AGL) over land due to higher and more frequent gust and maneuvering loads. Low level flights over water are not known to produce increased fatigue damage on the DHC-3. For that reason, the corrective actions of this [Transport Canada] AD must be accomplished sooner for aeroplanes that have been operated at low altitudes over land.

This condition, if not addressed, could result in cracking and failure of the structural integrity of the wing or the tie-bar.

You may examine the MCAI in the AD docket at https://www.regulations.gov by searching for and locating Docket No. FAA-2021-0214.

In the NPRM, the FAA proposed to require determining service life limits for the wing strut fitting on the main spar and for the tie-bar and following instructions for removal and replacement of affected parts. The FAA is issuing this AD to address the unsafe condition on these products.

Discussion of Final Airworthiness Directive

Comments

The FAA received comments from two commenters. The commenters were Talkeetna Air Taxi Inc. (Talkeetna Air) and Rust's Flying Service/K2 Aviation (Rust's Flying Service). The following presents the comments received on the NPRM and the FAA's response to each comment.

Request Regarding Equivalent Air Time

Both commenters requested the FAA change the proposed method of calculating equivalent air time by doubling the total hours on each component. Talkeetna Air requested the FAA allow increased visual and non-destructive testing inspections instead. Talkeetna Air and Rust's Flying Service suggested the FAA allow operators to calculate by using the formula and estimating the altitudes at which an airplane has operated, as provided in the service information, instead of by assuming all operations occur below 2,000 feet. Rust's Flying Service stated it has data to verify the operating altitudes of its aircraft.

As the FAA explained in the NPRM, there is no regulatory requirement for owners or operators to record or maintain the operating altitude history of an airplane. As

a result, this AD requires calculating the compliance time by assuming all operations occurred below 2,000 feet AGL (and therefore doubling the total hours). However, operators may request approval to determine equivalent air time differently as an alternative method of compliance under the provisions of paragraph (g)(1) of this AD. The FAA did not change this AD based on this comment.

Request Regarding Costs of Compliance

Talkeetna Air requested that the FAA adjust its estimated costs of compliance. The commenter stated that the hourly rate and number of estimated labor hours is too low for what would be required.

The FAA obtained the 300-hour labor time estimated in the NPRM from Viking Air Limited DHC-3 Otter Service Bulletin Number V3/0008, Revision NC, dated February 9, 2017. The FAA verified this number with Viking Air Limited and confirmed it is valid.

The FAA Office of Aviation Policy and Plans provides the labor rate of $85 per work-hour for the FAA to use when estimating the labor costs of complying with AD requirements.

The FAA did not change this AD based on this comment.

Conclusion

This product has been approved by the aviation authority of another country and is approved for operation in the United States. Pursuant to the FAA's bilateral agreement with this State of Design Authority, it has notified the FAA of the unsafe condition described in the MCAI referenced above. The FAA reviewed the relevant data, considered any comments received, and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products. This AD is adopted as proposed in the NPRM.

Related Service Information under 1 CFR Part 51

The FAA reviewed Viking DHC-3 Otter Service Bulletin Number V3/0008, Revision NC, dated February 9, 2017. The service information specifies determining service life limits for the wing strut fitting on the main spar and for the tie-bar and contains instructions for removal and replacement. The FAA also reviewed De Havilland Aircraft of Canada, Limited DHC-3 Otter Service Bulletin Number 3/37, Revision B, dated October 8, 1982. The service information specifies instructions for removing and replacing the fuselage to wing strut attachment tie-bar. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in ADDRESSES.

Differences Between this AD and the MCAI

The MCAI requires calculating the compliance time by using a formula and estimating the altitudes at which an airplane has operated. The MCAI also instructs operators to assume operations below 2,000 feet AGL when the operating altitude of the airplane is unknown. Because the FAA has no regulatory requirement for owners or operators to record or maintain the operating altitude history of an airplane, this AD requires calculating the compliance time by assuming all operations occurred below

2,000 feel AGL.

Costs of Compliance

The FAA estimates that this AD affects 41 airplanes of U.S. registry.

The FAA also estimates that it would take about 300 work-hours per airplane to replace both the wing strut fitting and the tie-bar. The average labor rate is $85 per work-hour. Required parts would cost about $5,599 per airplane.

Based on these figures, the FAA estimates the cost of this AD on U.S. operators to be $1,275,059 or $31,099 per airplane.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

(1) Is not a "significant regulatory action" under Executive Order 12866,

(2) Will not affect intrastate aviation in Alaska, and

(3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive: **2021-24-18 Viking Air Limited**: Amendment 39-21839; Docket No. FAA-2021-0214; Project Identifier 2018-CE-064-AD.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to Viking Air Limited Model DHC-3 airplanes, all serial numbers, certificated in any category.

(d) Subject

Joint Aircraft System Component (JASC) Code 5700, Wing Structure.

(e) Unsafe Condition

This AD was prompted by mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as fatigue damage of the wing strut lug fitting components or the fuselage to wing strut attachment (tie-bar). The FAA is issuing this AD to identify and correct potential fatigue damage of the wing strut lug fitting components of the fuselage to wing strut attachment.

The unsafe condition, if not addressed, could result in cracking and failure of the structural integrity of the wing or the tie-bar.

(f) Actions and Compliance

Unless already done, do the following actions in paragraphs (f)(1) through (3) of this AD:

(1) *For all airplanes*: Within 3 months after the effective date of this AD, determine and record the number of equivalent air time hours on each wing and tie-bar by doubling the total hours time-in-service (TIS) accumulated on each part. If the total hours TIS of a tie-bar is unknown or cannot be determined, use the total hours TIS of the wing strut lug fitting on the main spar.

(2) *For airplanes with a maximum certificated gross weight that has never exceeded 8,000 pounds*: Remove from service each left-hand and right-hand wing strut fitting and tie-bar by following the Accomplishment Instructions in Viking DHC-3 Otter SB V3/0008, Revision NC, dated February 9, 2017, and the Replacement section of the Accomplishment instructions in De Havilland Aircraft of Canada, Limited DHC-3 Otter Service Bulletin Number 3/37, Revision B, dated October 8, 1982, at whichever of the following compliance times that occurs later:

(i) Before the part accumulates 40,000 equivalent air time hours, or

(ii) Within 12 months after the effective date of this AD.

(3) *For airplanes with a maximum certificated gross weight that has ever exceeded 8,000 pounds*: Remove from service each left-hand and right-hand wing strut fitting and tie-bar by following the Accomplishment Instructions in Viking DHC-3 Otter SB V3/0008, Revision NC, dated February 9, 2017, and the Replacement section of the Accomplishment instructions in De Havilland Aircraft of Canada, Limited DHC-3 Otter Service Bulletin Number 3/37, Revision B, dated October 8, 1982, at whichever of the following compliance times that occurs later:

(i) Before the part accumulates 32,200 equivalent air time hours, or

(ii) Within 12 months after the effective date of this AD.

(g) Alternative Methods of Compliance (AMOCs)

(1) The Manager, New York ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO Branch, send it to the attention of the person identified in paragraph (h)(1) of this AD.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(h) Related Information

(1) For more information about this AD, contact Aziz Ahmed, Aviation Safety Engineer, New York ACO Branch, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; phone: (516) 287-7329; fax: (516) 794-5531; email: aziz.ahmed@faa.gov.

(2) Refer to Transport Canada AD CF-2017-29, dated August 24, 2017, for more information. You may examine the Transport Canada AD at https://www.regulations.gov by searching for and locating Docket No. FAA-2021-0214.

(i) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Viking DHC-3 Otter Service Bulletin Number V3/0008, Revision NC, dated February 9, 2017.

(ii) De Havilland Aircraft of Canada, Limited DHC-3 Otter Service Bulletin Number 3/37, Revision B, dated October 8, 1982.

Note to paragraph (i)(2)(ii): Although De Havilland Aircraft of Canada Limited DHC-3 Otter Service Bulletin Number 3/37, Revision B, dated October 8, 1982, is at revision B, the footer on pages 3 through 6 shows revision “A,” dated May 14, 1982.

(3) For both Viking and De Havilland Aircraft of Canada, Limited service information identified in this AD, contact Viking Air Limited Technical Support, 1959 De Havilland Way, Sidney, British Columbia, Canada, V8L 5V5; phone: (North America) (800) 663-8444; fax: (250) 656-0673; email: technical.support@vikingair.com; website: https://www.vikingair.com/support/service-bulletins.

(4) You may view this service information at FAA, Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, MO 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email: fr.inspection@nara.gov, or go to: https://www.archives.gov/federal-register/cfr/ibr-locations.html.

Issued on November 19, 2021.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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